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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,278	09/30/2003	Naoki Nakane	11-189	4730
23400	7590	12/09/2004	EXAMINER	
POSZ & BETHARDS, PLC 11250 ROGER BACON DRIVE SUITE 10 RESTON, VA 20190				DAVIS, OCTAVIA L
			ART UNIT	PAPER NUMBER
			2855	

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/673,278	NAKANE ET AL. <i>(OK)</i>
	Examiner	Art Unit
	Octavia Davis	2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 9/23/04.
- 2a) This action is FINAL.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 12-17 is/are allowed.
- 6) Claim(s) 1,5,6,9 and 10 is/are rejected.
- 7) Claim(s) 2-4,7,8 and 11 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All
  - b) Some \*
  - c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

**DETAILED ACTION*****Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5, 6, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laidlaw et al in view of Goto et al.

Regarding claims 1 and 5, Laidlaw et al disclose a torque sensing device comprising a first shaft 14 and a second shaft 16 connected coaxially, a torsion bar 18 converting a torque applied between said first shaft and said second shaft into a torsion displacement, a multi-polar magnet 20 fixed to said first shaft, magnetic yokes 21 fixed to said second shaft and disposed in a magnetic field 70 generated by said multi-polar magnet (See Col. 3, lines 4 – 33), collecting rings 50, 52 disposed along an outer surface of said one set of magnetic yokes and opposed to each other via an air gap 46 in an axial direction (See Col. 4, lines 3 – 7), and a magnetic sensor 48 for detecting the density of magnetic flux generated in said air gap (See Col. 3, lines 64 – 66), wherein a pair of flux brushes 42, 4 can include a bottom arcuate surface 54 that is adapted to magnetically engage the arcuate outer surface 56 of the flux rings (See Col. 4, lines 12 – 18) but does not disclose an outer cylindrical surface of one of the collective rings being surrounded by a magnetic shield. However, Goto et al disclose a relative rotational position detection apparatus

comprising an outer cylindrical section 11 having a magnetic shielding property (See Col. 6, lines 58 – 59).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Laidlaw et al according to the teachings of Goto et al for the purpose of, utilizing the degree of the overlap between open windows and nonmagnetic windows of an inner cylindrical section to determine the impedance of coils (See Goto et al, Col. 6, lines 59 – 63).

Regarding claim 6, in Laidlaw et al, the torque sensor is used in connection with a power steering apparatus (See Col. 5, lines 16 – 22).

Regarding claim 9, in Laidlaw et al, the magnetic sensor 48 includes a plurality of sensors disposed in parallel to each other with respect to a direction of magnetic flux (See Cols. 3 and 4, lines 66 – 67 and 1 – 2).

Regarding claim 10, in Laidlaw et al, the magnetic sensor 48 is disposed in the air gap 46.

### ***Allowable Subject Matter***

3. Claims 2 – 4, 7, 8 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 12 – 17 are allowed.

### ***Conclusion***

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4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Garshelis (5,351,555) discloses a circularly magnetized non-contact torque sensor and method for measuring torque using the same.

5. Any inquiry concerning this communication should be directed to examiner Octavia Davis at telephone number (571) 272 - 2176. The examiner can normally be reached on Monday - Thursdays (9:00 - 5:00), Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on (571) 272 - 2180. The fax phone number for the organization where this application where this application or proceeding is assigned is (703) 872 - 9306.



OD/2855

12/1/04



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